M E M O R A N D U M

TO: T. Joseph Johnson, P.E.
Harza Engineering Company

FROM: Mark A. Radcliffe
Brian G. Rupp, P.E.
Walter B. Satterthwaite Associates, Inc.

DATE: August 11, 2000

RE: Wetland delineation, Rye Nursery
City of Rye, New York
WBSAI Project No. 99-626-00

This memorandum summarizes the findings of a wetland delineation conducted on July 25 and August 4, 2000 at the Rye Nursery located at 421 Milton Road, Rye, New York. Wetlands on this property were determined and flagged in the field using the delineation methodology outlined by the United States Army Corps of Engineers (Corps) in there 1989 Wetland delineation manual.

The site is an irregularly shaped tract of 6.74 acres abutting Playland Parkway and Milton Road. The southern portion of the site is occupied by a nursery operation including a retail store and several greenhouses. The northern portion of the site contains a freshwater wetland abutting the Playland Parkway, and a small wooded area in the northeast corner of the site. The site is bisected by a city of Rye storm drain that flows in a southwesterly direction before ultimately discharging to an adjacent tributary to Blind Brook after leaving the site.

Based on the wetland delineation conducted, freshwater wetlands currently occupy approximately 1.1 acres of the site. However, fill materials including mulch, wood chips, and yard waste have been placed in the wetlands as documented by the City of Rye and observed at the site during the wetland delineation. Satterthwaite Associates estimated the extent of filled wetlands through a review of historical aerial photographs of the site and observation of site conditions.

Satterthwaite Associates conducted an evaluation for wetlands on the site following, in principle, the methodology specified by the U.S. Army Corps of Engineers (USACOE) following the USACOE 1989 Federal Wetland Delineation Manual. The site was first subjected to a reconnaissance-level field study in which dominant plant community types were identified throughout the site. As result of this inspection, three (3) dominant vegetative units identified on the site.

- Unit 1: Wooded unit dominated by wetland and transition species
- Unit 2: Mixed upland herbaceous species
- Unit 3: Herbaceous unit dominated by phragmites species

Vegetation data was interpreted using the U. S. Fish and Wildlife Services 1988 Northeast Regional Plant List, supplemented by information from various vegetation

identification keys for species not found on the regional list. The plant list categorizes species on the following system:

- *Obligate (OBL). Always found in wetlands under natural (not planted) conditions (frequency greater than 99 percent), but may persist in non-wetlands if planted there by man, or in wetlands that have been drained, filled, or otherwise transformed into non-wetlands.*

- *Facultative Wetland (FACW). Usually found in wetlands (67 to 99 percent frequency), but occasionally found in non-wetlands.*

- *Facultative (FAC). Sometimes found in wetlands (34 to 66 percent frequency), but also occurs in non-wetlands.*

- *Facultative Upland (FACU). Seldom found in wetlands (1 to 33 percent frequency) and usually occurs in non-wetlands.*

- *Non-Wetland (UPL). May occur in wetlands in another region, but not found (<1 percent frequency) in wetlands in the region specified. If a species does not occur in wetlands in any region, it is not on the lists.*

A list of dominant plant species for the Rye Nursery site can be found on the attached wetlands data forms. For a plant community to be considered hydrophitic, it must be composed of a majority of species classified as FAC, FACW and OBL. Based on the vegetation identified at the site, the wetland delineation investigation was focused to the northern portion of the site where hydrophitic plant communities were identified.

Within the vegetative units identified above, data was collected on the hydrology and soil conditions to determine which areas of the site exhibit wetland characteristics. Hydrology was determined based on topographic position and the list of indicators from the USACOE methodology. Wetland hydrology in the northern portion of the site was met by the presence of shallow standing water observed within a wooded area. Soil staining and other secondary indicators suggested that the depth of this water varies significantly over time.

Soil conditions were evaluated through the use of shallow hand auger borings which were conducted throughout the site in both upland and wetland areas. Soil evaluations on this site were based mainly on examination of color using the Munsell color charts as specified in the Corps' manual. Soils exhibiting low chroma characteristics (less than 2) and/or gleyed soil matrix within the upper (“A”) soil horizons were determined to be saturated at a frequency and duration to be considered hydric (wetland) soils.

The wetland upland transition zone observed in the northern potion of the site was abrupt. This transition from wetland to upland forms the boundary of the existing freshwater wetlands on the site, and was flagged in the field with flagging.

Based on field examinations, a significant area of wetlands on this site was filled with a mixture of soil, debris and organic wastes. An examination of historic aerial photographs and communications with the City of Rye confirmed past wetland filling activities. This filling is the reason for the unusually abrupt wetland/upland transition observed at the site. Without

further field investigations including auger soil borings and/or excavation test pit evaluations, it is difficult to determine the precise extent of wetlands filled. In lieu of doing additional intrusive field investigations, Satterthwaite Associates relied upon historic aerial photographic mapping, topographic mapping, and field observations to estimate the limits of filled wetlands on the site. The limits of the filled wetlands as estimated by Satterthwaite Associates was sketched on the site plan (Figure 1). The existing wetland area is approximately 1.1 acres, and the area of the filled wetlands is approximately 1.5 acres (excluding the existing wetland area). If desired, soil auger borings and test pit evaluations can be conducted to refine the filled wetland line.

Upon completing the delineation of the existing wetlands on the site, the location of the wetland flags were mapped using a Global Positioning System (GPS) receiver. The location and limits of the wetland area is shown on Figure 1 (attached). This figure is for illustrative purposed only and should not serve as a substitute for a survey site plan.

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DATA FORM
ROUTINE ON-SITE DETERMINATION METHOD

Field Investigator(s): Mark A Radcliffe Date: 2-27-97
Project/Site: 96-399-00 BVE/Upper Providence. State: PA County: Deleware
Applicant/Owner: Plant Community #/Name: Wetland
Note: If a more detailed site description is necessary, use the back of data form or a field notebook.
Do normal environmental conditions exist at the plant community?
Yes ☒ No ☐ (If no, explain on back)
Has the vegetation, soils, and/or hydrology been significantly disturbed?
Yes ☐ No ☒ (If no, explain on back)

VEGETATION

	Dominant Plant Species	Indicator Status	Stratum
1.	skunk cabbage	obl	Herb.
2.	money wart	obl	Herb
3.	spicebush	facw	Shrub/Scrub
4.	red maple	facw	Canopy
5.	false nettle	facw	Herb
6.	sugar maple	facu	Canaopy
7.	smooth alder	obl	Canopy
8.			
9.			
10.			
11.			
12.			
13.			

Percent of dominant species that are OBL, FACW, and/or FAC >75%
Is the hydrophytic vegetation criterion met? Yes ☒ No ☐
Rationale: The majority of plant species are OBL FACW or FAC

SOILS

Series/phase: Undetermined Subgroup:
Is the soil on the hydric soils list? Yes ☐ No ☐ Undetermined ☒
Is the soil a Histosol? Yes ☐ No ☐ Histic epipedon present? Yes ☐ No ☐
Is the soil: Mottled? Yes ☒ No ☐ Gleyed? Yes ☒ No ☐
Matrix Color: chroma <2 Mottle Colors:
Other hydric soil indicators:
Is the hydric soil criterion met? Yes ☒ No ☐
Rationale: Soil dispays hydric charecteristics at shallow depth

HYDROLOGY

Is the ground surface inundated? Yes ☒ No ☒ Surface water depth: Varies
Is the soil saturated? Yes ☒ No ☐
Depth to free-standing water in pit/soil probe hole: Varies
List other field evidence of surface inundation or soil saturation. flowing streams

Is the wetland hydrology criterion met? Yes ☒ No ☐
Rationale: The streams provided the hydrology for this plant comunity.

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes ☒ No ☐
Rationale for jurisdictional decision: All 3 wetland criteria are met